

REMARKS

The Office Action of April 21, 2005 has been received and its contents carefully noted.

The present application is directed to an arrangement for increasing the playback speed of a recorded audio signal. An example is shown in Figures 2 and 3 of the application's drawings. Figure 2 illustrates a sequence of five data blocks, a-e. These data blocks are thinned out by removing blocks b and d, thereby producing a shortened sequence of data blocks as shown in Figure 3. In order to avoid noise caused by abrupt transitions at the boundaries in Figure 3, the present application discloses that the amplitude of some of the units of data in the thinned-out data blocks can be varied so as to transform abrupt transitions into relatively smooth transitions.

Section 2 of the Office Action rejects independent claims 1, 6, and 11 (together with various dependent claims) for anticipation by U.S. patent 4,757,540 to Davis. For the reasons discussed below, however, it is respectfully submitted that the inventions defined by the independent claims are neither anticipated by Davis nor rendered obvious by this reference.

The Davis reference discloses a system for splicing audio segments together. In Figure 2 of the reference (the same Figure that is reproduced on the cover page of the patent), an edit point A is selected to mark the end of one segment and an edit point B is selected to mark the approximate beginning of the next segment. A correlation window 26 is established after the edit point A to reflect how the waveform in the first segment would have continued after the edit point A. Another correlation window, 28, is established at the edit point B of the second segment. The location of this second

correlation window is varied, as shown at 30 and 32, and the best fit with the waveform in correlation unit 26 is found. The segments are then spliced together.

Independent claim 1 recites “a conversion unit for **varying the amplitude of** either a sequence of units of data including the last unit of data of a data block immediately preceding a thinned data block or a sequence of units of data including the first unit of data of a data block immediately following the thinned data block, so that the last unit of data of the immediately preceding data block will be concatenated with the first unit of data of the immediately following data block along a smooth amplitude-varying curve.” In contrast, an ordinarily skilled person would understand that the different correlation windows 28, 30, and 32 at the approximate start of Davis’ second audio segment basically represent possible changes in the start position of Davis’ second segment. That is, the start point B shown in Davis’ Figure 2a is shifted so that the actual start of the waveform in Davis’ second segment will blend with the waveform at the end of his first segment. Davis does not vary the amplitude of the audio signal at the end of his first segment or at the beginning of his second segment. Instead, Davis adjusts where his second segment is to begin. Nothing in the reference would have led an ordinarily skilled person who wanted to improve Davis’ scheme in some way to vary the amplitude as recited in claim 1.

Independent claim 6 recites “a conversion unit for varying the amplitude ...”, and independent claim 11 also specifies a conversion unit for varying the amplitude. For reasons similar to those discussed above with respect to claim 1, it is respectfully submitted that Davis neither discloses nor suggests such conversion units.

Furthermore, independent claim 11 recites an input terminal that inputs digital data "including a first sequence of data blocks each of which consists of a predetermined number of units of data, the predetermined number being the same for all of the data blocks in the first sequence." Claim 11 then recites a thinning-out unit that removes data blocks from the first sequence to form a second sequence of data blocks. The conversion unit recited in claim 1 then varies the amplitude of units of data adjacent boundaries between the data blocks of the second sequence. The Davis reference is different. Even assuming for the sake or argument that Davis' first segment has the same number of units of data as his second segment to begin with, this would not still be true (in general) when the approximate starting point B of Davis' second segment is adjusted. But in claim 11, a second sequence of data blocks is formed by removing data blocks from a first sequence, with each data block in the first sequence having the same number of units of data. As a result of the thinning in claim 11, the data blocks in the second sequence must necessarily also have the same number of units of data, because the second sequence represents what remains of the first sequence after some of the data blocks are removed from the first sequence.

Even if Davis' first and second audio segments are the same size to start with, they would not (in general) remain the same size after Davis' adjustment of the approximate starting point B of his second segment.

Since the remaining claims depend from the independent claims discussed above and recite additional limitations to further define the invention, they are patentable along with their independent claims and need not be further discussed.

For the foregoing reasons, it is respectfully submitted that this application is now in condition for allowance. Reconsideration of the application is therefore respectfully requested.

Respectfully submitted,



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